

## CLAIMS

1. A method of controlling transmissions by a group of wireless transceivers, comprising:
  - transmitting to each of said group a status reporting command; and
  - receiving status reports from said group of transceivers at intervals determined according to said status reporting command.
2. A method as claimed in claim 1, wherein the status reports are transmitted in a channel shared amongst said group.
3. A method as claimed in claim 2, wherein the capacity of said channel is shared between said status reports and data transmitted by one or more of said group according to a channel allocation scheme transmitted to said transceivers.
4. A method as claimed in claim 2 or claim 3, wherein the intervals indicated by said status reporting commands are determined according to the demand by the transceivers for capacity in said channel.
5. A method as claimed in any preceding claim, wherein said status reports indicate a quantity of data awaiting transmission by the respective transceivers.
6. A method of transmission by a wireless transceiver, comprising:
  - receiving a status reporting command; and
  - transmitting status reports at intervals determined according to said status reporting command.
7. A method as claimed in claim 6, wherein said status reports are transmitted in a channel shared with other transceivers.

8. A method as claimed in claim 7, further comprising receiving a channel allocation signal indicating the allocation of a portion of said channel allocated to said transceiver, and transmitting communications data in said allocated portion of said channel.
9. A method as claimed in any one of claims 6 to 8, wherein the status reports indicate a quantity of data awaiting transmission at the transceiver.
10. A method of transmission by a wireless transceiver, comprising:  
transmitting a status report indicating an amount of data awaiting transmission by said transceiver and the required transmission time of at least some of said data.
11. A method as claimed in claim 10, wherein said status report relates to transmission in a specified channel.
12. A method as claimed in claim 10 or claim 11, wherein said status report includes:  
a length field indicating the amount of data awaiting transmission;  
a start time field indicating the required transmission time of a first portion of said data awaiting transmission; and  
an end time field indicating the required transmission time of a last portion of said data awaiting transmission.
13. A method of transmission in a contention-based access channel by a wireless transceiver, comprising:  
a) transmitting a burst in said channel;  
b) detecting whether said burst has collided with another burst in said channel;  
and, if a collision is detected at said detecting step, waiting for a period determined according to a repeat parameter before repeating steps a) and b), wherein said repeat parameter is received by said transceiver.
14. A method as claimed in claim 13, wherein said period is randomly or pseudo-randomly selected from a range indicated by said repeat parameter.

15. A method as claimed in claim 13 or claim 14, wherein said repeat parameter includes a increment by which said range is increased after each repetition of steps a) and b).
16. A method of controlling transmission by a wireless transceiver in a channel shared with transmissions by other transceivers, comprising:  
monitoring data transmitted to said transceiver;  
predicting, on the basis of said monitoring step, a demand for capacity in said channel by said transceiver, and  
transmitting to said transceiver an allocation signal indicating an allocation in said channel determined according to said predicted demand.
17. A method as claimed in claim 16, including generating a statistical model based on previous traffic flow to and from wireless transceivers, wherein the demand for capacity is predicted according to said statistical model.
18. A method as claimed in claim 16 or claim 17, including detecting the content of said monitored data, wherein the demand for capacity is predicted according to said content.
19. A method of allocating frequency channels to a plurality of wireless transceivers, comprising:  
transmitting to each of said transceivers a forward frequency channel allocation signal indicating an allocation of one or more forward frequency channels which that transceiver is to receive; and  
transmitting to each of said transceivers, in at least one said forward frequency channels assigned to that transceiver, a respective return channel allocation signal indicating an allocation of one or more return frequency channels in which that transceiver may transmit;  
wherein, for each forward frequency channel, a set of preferred return frequency channels is stored, such that for each of said transceivers to which a specified one of said forward frequency channels is allocated, the allocated one or more return frequency

channels is preferentially selected from said corresponding set of preferred return frequency channels.

20. A method of allocating contention-based capacity to a plurality of wireless transceivers, comprising:

transmitting to said transceivers a first contention-based capacity allocation signal indicating a first channel capacity assigned for contention-based access to said transceivers;  
receiving in said first channel capacity, transmissions from said transceivers;  
detecting a level of usage by said transmissions of said first channel capacity;  
determining, according to said level and said first channel capacity, a second channel capacity assigned for contention-based access to said transceivers; and  
transmitting a second contention-based capacity allocation signal, indicating said second channel capacity, to said transceivers.

21. Apparatus arranged to perform a method as claimed in any preceding claim.

22. A wireless base station arranged to perform a method as claimed in any one of claims 1 to 5, and 16 to 20.

23. A wireless terminal arranged to perform a method as claimed in any one of claims 6 to 15.

24. A method substantially as herein described.

25. Apparatus arranged to perform the method as claimed in claim 24.